



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2016-9531; Directorate Identifier 2015-CE-011-AD]

RIN 2120-AA64

Airworthiness Directives; M7 Aerospace LLC Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for certain M7 Aerospace LLC Models SA226-T, SA226-AT, SA226-T(B), SA226-TC, SA227-AC (C-26A), SA227-AT, SA227-BC (C-26A), SA227-CC, SA227-DC (C-26B), and SA227-TT airplanes. This proposed AD was prompted by detachment of the power lever linkage to the TPE331 engine propeller pitch control. This proposed AD would require installing a secondary retention device and repetitively inspecting the propeller pitch control for proper torque, with corrections as necessary. We are proposing this AD to correct the unsafe condition on these products.

DATES: We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed AD contact information M7 Aerospace LLC, 10823 NE Entrance Road, San Antonio, Texas 78216; phone: (210) 824-9421; fax: (210) 804-7766; Internet: <http://www.elbitsystems-us.com>; email: MetroTech@M7Aerospace.com; or Honeywell International Inc. 111 S. 34th Street, Phoenix, Arizona 85034-2802; phone: (855) 808-6500; email: AeroTechSupport@honeywell.com; Internet: <https://aerospace.honeywell.com/en/services/maintenance-and-monitoring>.

You may view this referenced service information at the FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call 816-329-4148.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2016-9531; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT ONE OF THE FOLLOWING:

- Justin Carter, ASW-142, Aerospace Engineer, Fort Worth Airplane Certification Office (ACO), FAA, 2601 Meacham Blvd, Fort Worth, Texas 76137-4298; telephone: (817) 222-5146; fax: (817) 222-5960; email: justin.carter@faa.gov; or

• Kristin Bradley, ASW-143, Aerospace Engineer, Fort Worth ACO, FAA, 2601 Meacham Blvd, Fort Worth, Texas 76137-4298; telephone: (817) 222-5485; fax: (817) 222-5960; email: kristin.bradley@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2016-9531; Directorate Identifier 2015-CE-011-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

We received reports of the airplane power lever linkage detaching from the TPE331 engine propeller pitch control (PPC) shaft on M7 Aircraft SA226 and SA227 airplanes. In flight operations, detachment may result in fuel flow to the engine remaining constant regardless of the power lever movement by the pilot. The orientation of the engine on certain M7 Aerospace airplanes increases the vulnerability of detachment. The PPC lever is an airplane part and its detachment from the TPE311 has been the subject of previous ADs on other airplane type designs. This condition, if not corrected, could result in uncommanded change to the engine power settings with consequent loss of control.

Related Service Information under 1 CFR part 51

We reviewed M7 Aerospace LLC SA226 Series Service Bulletin 226-76-012, dated March 17, 2015; M7 Aerospace LLC SA227 Series Service Bulletin 227-76-007, dated March 17, 2015; and M7 Aerospace LLC SA227 Series Commuter Category Service Bulletin CC7-76-004, dated March 17, 2015; that in combination for the applicable models describes the actions that must be done to comply with this NPRM.

We also reviewed M7 Aerospace SA226 Series Maintenance Manual Temporary Revision 71-02, dated March 15, 2016; M7 Aerospace SA227 Series Maintenance Manual Temporary Revision 71-03, dated March 15, 2016; and M7 Aerospace SA227 Series Commuter Category Maintenance Manual Temporary Revision 71-02, dated March 15, 2016; that in combination for the applicable models describes procedures for installing the secondary retention device on the PPC assembly and doing a visual inspection of the PPC lever.

We also reviewed Honeywell International Inc. Service Bulletin TPE331-72-2190, dated December 21, 2011, that describes procedures for replacing or reworking the propeller pitch control assembly, incorporating a threaded hole in the splined end of the shouldered shaft, and reassembling the propeller pitch control assembly.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section of this NPRM.

FAA's Determination

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

Proposed AD Requirements

This proposed AD would require replacement or rework of the PPC assembly to have a threaded hole in the splined end of the shouldered shaft, installation of a secondary retention feature for the airplane control linkage interface, and a repetitive inspection of the PPC lever torque with corrective action as necessary.

Costs of Compliance

We estimate that this proposed AD affects 360 airplanes of U.S. registry.

We estimate the following costs to comply with this proposed AD:

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Replacement or rework of the PPC assembly	19 work-hours X \$85 per hour = 1,615	\$1,000	\$2,615	\$941,400
Install secondary retention device	1 work-hour X \$85 per hour = \$85	\$10	\$95	\$34,200
Visual inspection of propeller pitch control lever	.5 work-hour X \$85 per hour = \$42.50	Not applicable	\$42.50	\$15,300

We estimate the following costs to do any necessary adjustments that would be required based on the results of the proposed inspection. We have no way of determining the number of aircraft that might need these adjustments:

On-condition costs

Action	Labor cost	Parts cost	Cost per product
Correct attachment of the propeller pitch control lever	.5 work-hour X \$85 per hour = \$42.50	Not applicable	\$42.50

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

M7 Aerospace LLC: Docket No. FAA-2016-9531; Directorate Identifier 2015-CE-011-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

(b) Affected ADs

None.

(c) Applicability

This AD applies to M7 Aerospace LLC SA226-T, SA226-AT, SA226-T(B), SA226-TC, SA227-AC (C-26A), SA227-AT, SA227-BC (C-26A), SA227-CC, SA227-DC (C-26B), and SA227-TT airplanes; all serial numbers, certificated in any category.

(d) Subject

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 61, Propellers/Propulsors.

(e) Unsafe Condition

This AD was prompted by detachment of the power lever linkage to the TPE331 engine propeller pitch control (PPC). We are issuing this AD to prevent detachment of the power lever linkage to the TPE331 engine propeller pitch control, which could result in uncommanded change to the engine power settings with consequent loss of control.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Applicable M7 Aerospace LLC Service Bulletins

Use the applicable service bulletins as listed in paragraph (g)(1), (2), or (3) of this AD as reference to complete the actions in paragraph (h)(1) or (2) of this AD:

(1) M7 Aerospace LLC SA226 Series Service Bulletin 226-76-012, dated March 17, 2015;

(2) M7 Aerospace LLC SA227 Series Service Bulletin 227-76-007, dated March 17, 2015; or

(3) M7 Aerospace LLC SA227 Series Commuter Category Service Bulletin CC7-76-004, dated March 17, 2015.

(h) PPC Lever Installation

(1) Within 100 hours time-in-service (TIS) after the effective date of this AD and repetitively thereafter at intervals not to exceed 100 hours TIS, visually inspect the PPC lever to assure the attachment is properly installed following the applicable service information listed in paragraph (h)(1)(i), (ii), or (iii) of this AD, as applicable.

(i) For Models SA226 Series: Pages TR-224 through TR-228 from M7 Aerospace SA226 Series Maintenance Manual Temporary Revision 71-02, dated March 15, 2016.

(ii) For Models SA227 Series: Pages 206 and 207 from M7 Aerospace SA227 Series Maintenance Manual Temporary Revision 71-03, dated March 15, 2016.

(iii) For Models SA227 Series Commuter Category: Pages 206 and 206A from M7 Aerospace SA227 Series Commuter Category Maintenance Manual Temporary Revision 71-02, dated March 15, 2016.

(2) Installation of the secondary retention device required in paragraph (j) of this AD terminates the repetitive visual inspections of the PPC lever attachment required in paragraph (h)(1) of this AD.

(i) Replace or Rework the Propeller Pitch Assembly

Within the next 600 hours TIS after the effective date of this AD or within the next 12 months after the effective date of this AD, whichever occurs first, do the actions in either paragraph (i)(1) or (2) of this AD following the Accomplishment Instructions in Honeywell International Inc. Service Bulletin TPE331-72-2190, dated December 21, 2011, as referenced in the applicable service information listed in paragraph (g)(1), (2), or (3) this AD.

(1) Replace the PPC. Remove the PPC assembly and replace with the applicable new design PPC using the part numbers listed in table 1 to paragraph (i)(1) of this AD.

Table 1 to Paragraph (i)(1) of this AD – Part Number PPC Assemblies

Part Number PPC Assembly to Remove	Part Number PPC Assembly to Install
869130-11	70000295-11
869130-12	70000295-12
869130-13	70000295-13
869130-14	70000295-14
869130-16	70000295-16
869130-17	70000295-17
869130-18	70000295-18
869130-19	70000295-19
869130-30	70000295-30
895481-1	70000298-1
895481-2	70000298-2
895481-4	70000298-4
895481-5	70000298-5

895481-6	70000298-6
895481-7	70000298-7
895481-17	70000298-17
895481-18	70000298-18
895481-19	70000298-19
895481-20	70000298-20
895481-22	70000298-22

(2) Rework the PPC assembly. Inspect the splined end of the shouldered shaft for the presence and good condition of a threaded hole, repairing or replacing the cam assembly, and reworking the PPC assembly as necessary.

(j) Secondary Retention Feature

(1) Before further flight after the replacement or rework of the PPC assembly required in paragraph (i) of this AD, install the secondary retention feature on the PPC assembly following the applicable service information listed in paragraph (j)(1)(i), (ii), or (iii) of this AD.

(i) For Models SA226 Series: Pages TR-224 through TR-228 from M7 Aerospace SA226 Series Maintenance Manual Temporary Revision 71-02, dated March 15, 2016.

(ii) For Models SA227 Series: Pages 206 and 207 from M7 Aerospace SA227 Series Maintenance Manual Temporary Revision 71-03, dated March 15, 2016.

(iii) For Models SA227 Series Commuter Category: Pages 206 and 206A from M7 Aerospace SA227 Series Commuter Category Maintenance Manual Temporary Revision 71-02, dated March 15, 2016.

(2) Installation of the secondary retention device terminates the requirement for the repetitive inspections of the PPC lever torque required in paragraph (h) of this AD.

(k) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Fort Worth Airplane Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in paragraph (l)(1), Related Information, of this AD.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(l) Related Information

(1) For more information about this AD, contact one of the following individuals:

(i) Justin Carter, ASW-142, Aerospace Engineer, Fort Worth Airplane Certification Office (ACO), FAA, 2601 Meacham Blvd, Fort Worth, Texas 76137-4298; telephone: (817) 222-5146; fax: (817) 222-5960; email: justin.carter@faa.gov; or

(ii) Kristin Bradley, ASW-143, Aerospace Engineer, Fort Worth ACO, FAA, 2601 Meacham Blvd, Fort Worth, Texas 76137-4298; telephone: (817) 222-5485; fax: (817) 222-5960; email: kristin.bradley@faa.gov.

(2) For service information identified in this AD, contact M7 Aerospace LLC, 10823 NE Entrance Road, San Antonio, Texas 78216; phone: (210) 824-9421; fax: (210) 804-7766; Internet: <http://www.elbitsystems-us.com>; email: MetroTech@M7Aerospace.com; or Honeywell International Inc. 111 S. 34th Street, Phoenix, Arizona 85034-2802; phone: (855) 808-6500; email: AeroTechSupport@honeywell.com; Internet: <https://aerospace.honeywell.com/en/services/maintenance-and-monitoring>. You may view

this referenced service information at the FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call 816-329-4148.

Issued in Kansas City, Missouri on December 8, 2016.

Pat Mullen,
Acting Manager, Small Airplane Directorate,
Aircraft Certification Service.

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